

# COLLEGE OF SCIENCES

## Course Syllabus

DEPARTMENT: Engineering Technology  
COURSE NUMBER AND Title: ETDD 1361 Engineering Graphics  
SEMESTER: Spring, 2018  
CREDIT HOURS: 3 (2-2 Format)  
LECTURE LOCATION/ TIME: Pirkle, Room 240  
Section 1 Tuesday & Thursday 8:00 am – 9:50 am  
Section 2 Tuesday & Thursday 10:00 pm – 11:50 pm

Office Hours: By Appointment

INSTRUCTOR: D. L. Benke  
OFFICE: Pirkle 420  
P.O. Box 2266/SHSU  
Email: [dlb011@shsu.edu](mailto:dlb011@shsu.edu)

Supplies: Basic drafting equipment Package –  
Campus Corner on Sam Houston Ave.  
Berkat Book Art Supply  
1108 16<sup>th</sup> Street  
Assignment Package  
Available at Eagle Graphics  
1304 Sam Houston Ave.

**Course Description:** This is a recognized standard course in beginning drawing for engineering and industrial education. The techniques of sketching, geometric construction, dimensioning, multiview projection, section and auxiliary views are utilized. The purpose of this course is to provide students with an understanding of the importance of modern graphic communication to the design process. Students will gain hands-on experience creating freehand sketches, CAD technical drawings using orthographic projections, sections, auxiliary views, and isometric drawings. Emphasis is placed on creating drawings that are neat, correctly dimensioned using industry standards. Students will use traditional mechanical drafting methods and CAD. Classroom activities will complement and the support the lab exercises with explanations and demonstrations of required activities.

### Required Course Textbook:

AutoCad 2018 Tutorial First Level 2D Fundamentals  
By Randy H. Shih SDC Publications

### **Course Objectives:**

This course is a comprehensive introduction to the engineering graphics utilized in today's industry and industrial technology education. Students are given comprehensive coverage of drafting theories, symbols, and ANSI standards, which are highlighted and put into practice by having each student complete a number of drawing assignments. The areas covered including technical sketching, lettering, drafting, equipment, geometric construction, orthographic projection, sectional views, basics dimensioning, and an introduction to CAD.

By the end of this course, students should be able to

- Apply primary techniques in engineering drafting practices and CAD software application
- Visualize objects from multiview drawings
- Sketch objects in multiview and pictorial views
- Use AutoCAD for 2D drawings

### **Lecture/Demonstrations:**

The scheduled class meeting time is used for instructional lectures, demonstrations, discussion, lab activities, and evaluation. Lectures will focus upon the essential procedures, techniques, and other information needed to complete drafting assignments. Lecture sessions are intended to introduce the necessary body of drafting theory that you need to master.

### **CAD:**

The thrust of this course is on the principles, tools, and techniques of advanced drawing that are used in both manual and CAD situations, with emphasis on CAD drafting and design techniques.

### **Laboratory Assignments:**

Laboratory assignments are evaluated using the following criteria as appropriate for the specific assignment:

Directions followed correctly and all parts of the assignment completed.

Construction--views constructed correctly and placed in proper orthographic arrangement.

Composition on the screen or page -- sufficient spacing between views, drawing centered, lettering sufficient size, title information complete.

Accuracy--lines meet exactly where expected, proper size and position of parts and of the entire object.

Line types--proper line types used for object, hidden features, center lines, cutting planes, etc.

Dimensioning--placement, spacing, from proper views, appropriate text size, precision, notes & leaders in conformity to industry standards.

### **Equipment and Supplies:**

**CAD software:** AutoCAD will be available in the computer lab. Students may choose to purchase his/her own software for personal computers at home.

### **Basic drafting equipment:**

Triangular Engineers scale	Lead ( 2h, 6h, f, ect)
Triangular Architects scale	Eraser
6" - 30/60 degree triangle	Eraser shield
6" - 45 degree triangle	Compass (6 inch)
Pencils or Lead Holder(s)	Dividers
Tape or dots	Paper

### **ATTENDANCE POLICY:**

1. **Attendance:** Every student is expected to be present and ***on time*** for every class. You are tardy whether you come in late or leave early. Roll will be taken at the beginning of each class or lab session. In case you are absent, whether excused or unexcused, you are still responsible for the material covered.

#### Attendance Grade

0 -2 absents	10%
3 absents	5%
4 absents	0%

2. Each student should be prepared for class/lab by having carefully read and studied all assigned textbook readings and/or handouts. Each project is to be done on an individual basis. Drawings / Assignments turned in late will be penalized ***One point per assignment subtracted from a student's final grade.*** Absences do not exempt you from the responsibility of turning material in on time and they do not extend the due date of the assignment schedule.
3. There will not be repeat exams, quizzes, or makeup assignments except for extenuating circumstances (documented illness, family crisis, etc.) or by mutual agreement prior to the absences between the instructor and the student.  
\*\*\*\*(Exempt attendance notification is the responsibility of the student and all info referring to the absent must be presented to the instructor within one week from the date in question. Therefore, the student should call or e-mail the instructor as soon as possible when becoming aware of the problem.)
4. If you have perfect attendance during this course you will have the option to be exempt

from taking the final exam if you have earned enough **POINTS** to receive an A or B.

**Exam:**

Comprehensive mid-term and final examinations may be given. Examinations are a part of the overall learning experience, and will contribute to the mastery of the body of knowledge you gain from the course. Content of examinations will be taken from assigned text readings. Exams may be eliminated depending on class progress and demonstrated student performance.

**Quizzes:**

There are no Quizzes listed in the document. The instructor reserves the right to schedule a quiz at any time that he/she feels it may be necessary. These can be planned and the instructor will notify the students one week in advanced or they can be “pop” quizzes given without notice. Any students using a cell phone during these quizzes will receive a “zero” on the quiz (please refer to the cell phone policy listed below).

**Course Evaluation:**

Each student should be prepared for class/lab by having carefully read and studied all assigned textbook readings and/or handouts. Each project is to be done on an individual basis. You should expect to spend a minimum of three to four hours per week in lab. Each student is expected to individually complete all drawings exercises for each of the units in this course. Penalties will be assessed for work, which is turned in late. Each student will also complete unit tests plus a comprehensive final exam. The final grade for the course will be averaged as follows.

**Grading Scale:**

Exams	10%
Review Questions	20%
Lab Assignments (CAD)	20%
Practical Problems (Manual)	20%
Attendance	10%
Final	20%

Percentage range	Grade
90 – 100	A
80 – 89	B
70 – 79	C
60– 69	D
0-59	F

**TENTATIVE SCHEDULE**

<b>Wk</b>	<b>date</b>	<b>Assignment</b>
1	01/18 Thursday	Introduction to the course Review Course Syllabus
2	01/23 Tuesday	Introduction to the course Review Course Syllabus
3	01/25 Thursday	Multi-view Sketching and Projection
4	01/30 Tuesday	*** Geometric Construction Drawings***
5	02/01 Thursday	Multi-view Sketching and Projection
5	02/06 Tuesday	Multi-view Sketching and Projection
6	02/08 Thursday	Multi-view Sketching and Projection
7	02/13 Tuesday	Multi-view Sketching and Projection
8	02/15 Thursday	Multi-view Sketching and Projection
9	02/20 Tuesday	Isometric Drawings
10	02/22 Thursday	Isometric Drawings
11	02/27 Tuesday	Dimension Drawings
12	03/01 Thursday	Dimension Drawings
13	03/06 Tuesday	Section View Drawings
14	03/08 Thursday	Section View Drawings
*****	03/12 thur 03/16	SPRING BREAK
15	03/20 Tuesday	Open lab
16	03/22 Thursday	*** <u>All Manual Drawings DUE</u> ***
17	03/27 Tuesday	Introduction to CAD
18	03/29 Thursday	Introduction to CAD
19	04/03 Tuesday	Lab Assignments
20	04/05 Thursday	Lab Assignments
21	04/10 Tuesday	Lab Assignments
22	04/12 Thursday	Lab Assignments
23	04/17 Tuesday	Lab Assignments
24	04/19 Thursday	Lab Assignments
25	04/24 Tuesday	Lab Assignments
26	04/26 Thursday	***Thanksgiving Holiday***

27	05/01	Tuesday	Review
28	05/03	Thursday	Review

\*\*\*All Assignments DUE\*\*\*  
 \*\*\*\*\*No Assignments accepted after this date\*\*\*\*\*

**05/07 - 05/10                      FINAL WEEK**

## **REVIEW QUESTIONS**

All answers are to be typed. The question does not have to be on the sheet.  
 Be sure to have the Chapter number on each assignment. All Due by APRIL 24, 2017

Chapter 1	Page 1-37	1 to 8	Due 03/20
Chapter 2	Page 2-30	1 to 5	Due 03/27
Chapter 3	Page 3-40	1 to 6	Due 04/03
Chapter 4	Page 4-29	1 to 9	Due 04/10
Chapter 5	Page 5-27	1 to 5	Due 04/17
Chapter 6	Page 6-26	1 to 6	Due 04/24

## **Academic Dishonesty:**

When under the pressure of deadlines, some students may be tempted to copy another student's drawing and hand it in as their own. Before yielding to such temptation, the student should be aware that (a) the University's policy statement on academic ethics (b) that I would consider failure for the course a more appropriate punishment. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

## **Classroom Rules of Conduct:**

Students will avoid doing behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, obstructs the mission of the university. **Cellular telephones, ear phones and pagers must be turned off before class begins.** Students are prohibited from eating and drinking in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

### **Student Absences On Religious Holy Days Policy:**

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first fifteen days of the semester or the first seven days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

### **TOBACCO POLICY**

In order to promote a healthy, safe, and aesthetically pleasing work, educational, and living environment, Sam Houston State University (SHSU) will endorse a smoke free and tobacco free environment. The primary purpose of this policy is to establish guidelines prohibiting smoking and the use of all tobacco products. Tobacco products include cigarettes, cigars, pipes, smokeless tobacco, and all other tobacco products.

### **CELL PHONE POLICY**

The use by students of electronic devices that perform the function of a telephone or text messages during class-time may be prohibited if deemed disruptive by the instructor to the conduct of the class. Arrangements for handling potential emergency situations may be granted at the discretion of the instructor. Failure to comply with the instructor's policy could result in expulsion from the classroom or with multiple offenses, failure of the course.

Any use of a telephone or text messages or any device that performs these functions during a test period is prohibited. These devices should not be present during a test or should be stored securely in such a way that they cannot be seen or used by the student. Even the visible presence of such a device during the test period will result in a zero for that test. Use of these devices during a test is considered de facto evidence of cheating and could result in a charge of academic dishonesty (see student code of conduct

<http://www.shsu.edu/students/guide/StudentGuidelines2010-2012.pdf#page=29>).

### **Disabled Student Policy:**

It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities from their instructors, school/department chair, or by contacting the Chair of the Committee for Continuing Assistance for Disabled Students and Director of the Counseling Center, Lee Drain Annex, or by calling (936) 294-1720.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Counseling Center and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. **NOTE: no accommodation can be made until you register with the Counseling Center**

**No assignments will be accepted after Class 28**

**“The above schedule, policies, and assignments in this course are subject to change in the event of extenuating circumstances or by mutual agreement between the instructor and the students.” “The instructor reserves the right to change assignments and the grading system in this document.”**